



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Rowell Chemical Corporation, Willow Springs, Illinois

FROM: Emma Leeds, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Rowell Chemical Corporation

Facility Location: 10100 Archer Avenue, Willow Springs, Illinois 60408

Date of Inspection: October 19, 2022

EPA Inspector(s):

1. Emma Leeds, Environmental Engineer
2. Natalie Topinka, Environmental Scientist

Other Attendees:

1. John Davies, Terminal Manager – Rowell Chemical Corporation

Contact Email Address: jdavies@rowellchemical.com

Purpose of Inspection: To investigate odor complaints and compliance with applicable permits and Clean Air Act regulations

Facility Type: Inorganic chemical and asphalt storage and distribution

Regulations Central to Inspection: Federally Enforceable State Operating Permit (FESOP)
I.D. Number 031327AAP

Arrival Time: 9:15 AM

Departure Time: 10:50 AM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from John Davies unless otherwise noted.

Process Description:

Rowell Chemical Corporation (Rowell, or the facility) mostly stores and distributes alkalis, acids, and asphalt. Chemicals, including but not limited to fluorosilicic acid, nitric acid, hydrochloric acid (HCl), sodium bisulfite, and chlorine, are received via rail and barge. Several basic processes are performed on some of the chemicals before being stored in tanks and then distributed. These processes include the manufacture of up to 16% sodium hypochlorite (bleach) from the reaction of caustic soda, chlorine, and water; the mixture of urea and hot water to create diesel exhaust fluid; and the dissolution of HCl from approximately 36% to 31%.

Asphalt is received via rail, barges, and occasionally trucks and sent to storage. The eight asphalt storage tanks on-site are heated to 250 – 300 ° Fahrenheit and vent to the atmosphere through rooftop gooseneck vents. Asphalt is loaded into trucks and rail cars for distribution using piping that descends partly into the tanks (rather than a submerged loading process).

Staff Interview: The facility operates with 40 employees from Sundays at 9 PM to Fridays at 6 PM.

Fluorosilicic acid and nitric acid are received and distributed at the facility, but not stored. Rowell is planning to phase out its distribution of nitric acid in December 2022. In accordance with Rowell's FESOP, each of the three HCl tanks has a wet scrubber in order to control emissions. Fresh water is added to each scrubber every morning, and the water is emptied at the end of the day and used as a diluent back into the product.

Rowell built the first asphalt storage tank at the facility in 2008 and has since received numerous asphalt odor complaints from the Willow Springs community. A sheriff calls John Davies when an asphalt odor complaint is received by the city and Mr. Davies investigates for the source and tries to address the issue. The facility does not keep a record of the complaints or have a specific protocol to address the complaints. Several years ago, Rowell installed a CECO filter to the truck loading racks to attempt to decrease odors.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA toured the full perimeter of the terminal, first observing a diesel fuel tank, two potassium hydroxide tanks, a vacant insulated tank, one sodium bisulfite tank, and three 50% sodium hydroxide tanks. Next, EPA observed the 100,000-gallon HCl tank. Mr. Davies stated that Rowell was planning to replace the scrubber for this tank during the upcoming weekend due to mechanical issues related to old age. EPA then observed the DEF tanks followed by the bleach production reactors with water-cooled chillers and three caustic soda tanks. Next, at the largest HCl tank, Mr. Davies stated that this tank is equipped with a vapor return system for HCl truck loading.

EPA observed several asphalt loading areas with a Forward Looking Infrared (FLIR) camera but did not take any recordings. EPA detected an asphalt odor downwind of the asphalt tanks.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Asphalt and HCl throughput records for 2019, 2020, and 2021
- Annual emission reports including calculations for 2019, 2020, and 2021
- Safety Data Sheet for all chemicals stored and distributed
- Safety Data Sheet for asphalt that indicates vapor pressure
- Performance test reports for scrubbers
- Summary of projects and attempts to address odor complaints
- Maintenance and changeout records for CECO filters
- Inspection and maintenance records for scrubbers from 2021

DIGITAL SIGNATURES

Report Author: _____

Section Supervisor: _____

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APPENDICES AND ATTACHMENTS

- 1.* Appendix A – Digital Image Log

Facility Name: Rowell Chemical Corporation

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APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Emma Leeds	2. Archival Record Location: USEPA Region 5 Electronic Records Center
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Image Number	File Name	Date and Time (CT)	Description of Image
1	PA190026.JPG	10/19/2022, 10:25 AM	1.1-million-gallon HCl tank with scrubber and vapor return system
2	PA190027.JPG	10/19/2022, 10:33 AM	CECO filter for truck asphalt loading